High-Performance Workplace Practices for Greek Companies

Introduction

A growing body of empirical evidence, mainly originating from American studies, suggests that firms are increasingly incorporating high-performance human resources (HR) practices in order to improve financial performance and sustain a competitive advantage (see Xirogiannis, et al. 2008; Namasivayam, et al. 2007; Becker and Gerhart, 1996; Guest, 1997 for reviews). In doing so, businesses seek to organize their workplaces in such a way that makes efficient use of human capital.

In this study, we aim to examine which, if any, HR practice impinges upon the performance of Greek companies. Few studies have examined the effect of HR on organizational performance within the context of Mediterranean countries (Brewster et al. 2004; Khilji and Wang, 2007; Guidetti and Mazzanti 2007). Numerous workplace practices may have an influence upon firm performance, but the empirical examination of the HR practices proposed by Pfeffer (1998) has produced reliable results in Western countries (US, Northern Europe). We focus on Greek food sector which presents many similarities with European and Mediterranean food sectors.

The next section reviews the relevant literature on best HR practices. A discussion of the methodology employed for data collection follows. The last two sections analyse the key results, the major implications of the study and the possible avenues for future research.

Literature Review

There is consensus that human capital is significant related to firm performance. Furthermore, there is a long list of high-performance HR practices that may affect the organizational performance. However, results are inconclusive and limited within the

context of a few Western countries (Arthur and Boyle, 2007). In order to examine the effect of HR practices on food companies' performance, we choose to examine HR practices initially proposed by Pfeffer (1998) which according to the literature, can be expected to influence the firm performance.

In his seminal work, Pfeffer (1998) proposed a list of HR practices that affect firm performance (Table I): (a) employment security (b) selective hiring, (c) self-managed teams and decentralization of decision making, (d) comparatively high compensation contingent on organizational performance, (e) extensive training, (g) reduced status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels, and (g) extensive sharing of financial and performance information throughout the organization. A growing number of empirical evidence suggests that the HR practises proposed by Pfeffer (1998) have a significant effect on various setting. For instance, Ahmad and Schroeder (2003) attempted to generalize the findings of the impact of seven HRM practices proposed by Pfeffer on operations management across countries and industries. The findings provide support for Pfeffer's HR practices.

The following sections will develop hypotheses concerning the relationship between HR practices and firm performance.

<<Insert Table I about here>>

Compensation policy

Performance-based compensation is considered as a straightforward practice that firms use in order to reward employees. Employees get rewarded based on various criteria such as individual or group productivity and shareholder value.

Compensations may also include a mix of commissions and bonuses, and profit-sharing.

The practice of pay for performance has both theoretical and empirical support. Empirical evidence suggests that performance-based compensation has a positive effect upon employee and organizational performance (see for reviews: Vlachos, 2008; Cardon and Stevens, 2004). Takeuchi et al. (2007) examined Japanese organizations and concluded that high- performance work systems generate a high level of collective human capital and encourage a high degree of social exchange within an organization, and that these are positively related to the organization's overall performance.

Expectancy theory posits that pay level will influence employee performance when (a) employees perceive that a relationship exists between their efforts and performance and (b) employees gain specific benefits if they perform well (Ngo et al. 1998). Empirical studies on the relationship between performance-related pay and company performance have generally found a positive relationship, but a growing body of empirical evidence suggests that it is not just pay level that matters, but pay structure as well (Wimbush, 2005; Singh 2005).

Decentralization & self-managed teams

In self-managed teams, employees are organized into groups appointed with authority, resources and information to manage and direct themselves toward common goals (Elmuti, 1997). Team working is common sense in business as usual but team performance is far from guaranteed. For example, Humphrey et al. (2007) examined the cognitive and psychological factors of self-managed team performance and argued that there is no one best way to make placement decisions on self-managed teams.

Thang et al. (2007) compared the performance of self-managed teams between Vietnam and China and found that culture is an mediating factor.

Effective team working requires professional people skills as well a deep understanding of aptitudes, abilities, temperaments, idiosyncrasies, and personal traits of fellow employees (Ahmad and Schroeder, 2003). Teamwork and decentralization of decision making promotes employee commitment participation and create a sense of attachment, thus indirectly affecting firm performance (Tata and Prasad, 2004).

Frankforter and Christensen (2000) pointed out that the self-managed work-team approach provides many advantages over the traditional work design such as increased job satisfaction, improved communications, shorter decision time, and improved employee self-esteem.

Information Sharing

Sharing of information may have a dual effect: Firstly, it conveys employees the right meaning that the company trusts them. Secondly, in order to make informed decision, employees should have access to critical information. Communicating performance data on a routine basis throughout the year help employees to improve and develop. Employees presumably want to be good at their jobs, but if they never receive any performance feedback, they may perceive to have a satisfactory performance when in fact they do not (Chow et al., 1999). Furthermore, information sharing fosters organizational transparency which reduces turnover (Ahmad and Schroeder, 2003) and forges synergistic working relationship among employees (Nonaka, 1994).

Selective Hiring

This practice can ensure that the right people, with the desirable characteristics and knowledge, are in the right place, so that they fit in the culture and the climate of the organization. Moreover, pinpointing the rights employees would decrease the cost of employees' education and development.

Schuster (1986) reported that selective hiring is a key practice that creates profits and Huselid (1995) after studying various HR practices of high performance companies found that attracting and selecting the right employees increase the employee productivity and reduce turnover.

Michie et al. (2001) argued that a possible indirect link between selective hiring and organisational performance can be the forging of internal bonds between managers and employees that creates the right culture for productivity growth. Collins and Clack (2003) argued that the practice of selective hiring results at sales growth. Paul and Anantharaman *(2003)* pointed out that an effective hiring process ensures the presence of employees with the right qualifications, leading to production of quality products and consequently in increase of economic performance.

Training and Development

Although there is a consensus that training and development is an important HR practice, only recently there as empirical attempts to investigate its relation to organisational performance (Guidetti and Mazzanti, 2007; Huselid, 1995; Storey, 2002). Training programs increase the firm specificity of employee skills, which, it turn, increases employee productivity and reduces job dissatisfaction that results in employee turnover (Koch and McGrath,1996). Secondly, training and developing internal personnel reduces the cost and risk of selecting, hiring, and internalising people from external labour markets, which again increases employee productivity and reduces turnover (Koch and McGrath, 1996). Stavrou et al. (2007) utilized

Kohonen's Self-Organizing Maps to explore the connections between human resource management and perceived organizational performance in the European Union's private and public sectors and found that training & development practices were strongly related to performance.

Accenture's in their '*The High Performance Workforce Study 2004'* found that companies that master the "*human capital capabilities they believe are absolutely critical to their success*" show "*a significantly higher return to shareholders over time*." (Accenture, 2004). In its year-long study of 244 executives in six countries, Accenture found that companies with superior workforce and organizational excellence attribute their failures in most cases to underperforming HR and training departments. Accenture reported that, recognizing these shortcomings, companies have implemented a wide range of human resource and training programs designed to improve workforce performance—and, in many cases, have increased their spending to do so. Despite these efforts, only 16% of executives said are very satisfied with the training function.

Job Security

Job security creates a climate of confidence among employees and maintains their commitment on the company's workforce. Job security requires a certain degree of reciprocity: firstly, a company must signals a clear message that jobs are secure; then, employees believing that this is true, feel confident and commit themselves to expend extra effort for the company's benefit; finally, a company that have learnt that job security contributes to its performance, invests again in job security (Pfeffer, 1998). Probst (2002) has developed a conceptual model of the antecedents and consequences of job security. Antecedents include worker characteristics, job characteristics,

organizational change and job technology change. Consequences include psychological health, physical health, organizational withdrawal, unionisation activity, organizational commitment and job stress. Jon involvement, cultural values, and procedural justices moderate job security perceptions and attitudes.

Table II summarises the construct and item development with its supporting literature. Figure 1 illustrates the associations between these hypotheses and relevant constructs.

<<Insert Table II about here >>

<<Insert Figure 1 about here >>

HRM in food sector

Food sector plays an increasingly important economic role in Mediterranean basin and relies heavily on the skills and abilities of its people to deliver food with safety and quality in competitive prices. Although there are many recent technological advances and product innovations in food sector, recent food crises demonstrated that human capital may be the sole resource in safeguarding quality and safety adequately, thus indirectly improving firm competitiveness and performance.

We assume that food firms adjust human resource practices in response to competitive conditions. Although there are indications that the nature of HR practices in food sector has changed dramatically over time, there is scarce empirical evidence to direct research. For example, Jatib (2003) reported Food safety and Quality Assurance systems were key drivers of competitiveness in Argentine but their successful application was subjective to structural change of human resources. Kupier and Leat (1999) reported that 'human factor'-related constraints (poor motivation in the

workforce, a lack of marketing management expertise and limited market orientation at the senior level) inhibited the marketing development of the Polish agri-food sector. Ben-Ner et al. (1999) noted that although more food than non-food firms utilized employee participation in decision-making in 1980, food firms have been slower adopters of HR practices. The increasing dominance of large retailers has dramatically altered the competitive environment in the industry. The predominant type of job in the supermarket industry is changing from a full-time, relatively well paid position to a job with irregular and part time hours, low pay, and few options for training and career advancement (Hughes 1999). However, the changes in HR practices introduced by large retailers do not necessarily reflect the whole food sector, which is excessively filled with SMEs.

Method

The Greek food sector

The food sector's structure is bipolar; on the one hand, a few large companies dominate the market such as the multinationals (e.g. Nestlé, Carrefour) and on the other hand, there is a significant group of small and medium-sized firms that operate mostly in regional markets.

In the Greek food manufacturing, there were 1,445 companies with one or more employees in 2004 (on average 7.02 employees per firm). Over 80% of the enterprises operating in this sector are SMEs (with less than 250 employees). The total sales of the sector were 8.87 billion euros in 2004. Table III presents the structure of Greek food sector.

It is noteworthy that the Greek food sector has undergone a major transformation over the past decade. For example, new retail warehouses - regional distribution

centres have been built whilst there has been an increasing use of information technology applications. That transformation led to an increased bargaining power for the retailers in the local supply chain vis-à-vis the manufacturers that is a phenomenon taking place in most European retail environments (Dawson, 2004). That power is also the outcome of the heightened food retail market concentration level. It is estimated that the top 10 food multiples enjoy 86% of the total food retail market in terms of sales. Based on the above, it can be reasonably concluded that the food sector in Greece presents strong structural and operational similarities with the food sectors in the rest European Union member states, mainly with those in the Southern Europe.

<<Insert Table III about here>>

The sampling procedure and sample

While Figure 1 is a model of the firm performance, we operationalise and measure managing directors' perceptions of the model's variables in their work situations. In order to develop a robust model linking HR practices and firm performance, we drew our sample from food companies operating in Greece for a minimum of five years. In-depth interviews were conducted with key decision makers prior to designing a pretest. The questionnaire was pretested with randomly selected firms. Based on the results of the pretest instrument, the final questionnaire was refined. Constructs, item development and subsequent questions development are included in **Table II**. Respondents were managing directors of Greek food firms.

In terms of the empirical research, we posted questionnaires to a random sample of 372 food manufacturing / processing companies, which corresponds to about one fourth of the population Greek food manufacturing companies. We got 71

questionnaires. The total response rate was 19.1%, which is higher than similar studies of Greek food companies (Vlachos and Bourlakis, 2006; Myloni et al., 2004). Companies that did not show interest in the research were conducted by phone and they reported that the main reasons for non-response was lack of time and the fact that answering questionnaires was not one of their top priorities. To ensure that the respondents were comparable to non-respondents, analyses of variances were conducted between these groups. The non-response bias was assessed by comparing early respondents with late respondents (Armstrong and Overton, 1977).

Measures

Principal component analysis with varimax rotation was conducted to assess the underlying structure for the nineteen HR practices questionnaire. The scales were measured on a Likert format ranging from 1 (strongly disagree) to 5 (strongly agree). Six factors were requested, based on the fact that the items were designed to index the six HR practices. After rotation, self-managed teams accounted for 17.53% of the variance, compensation policy for 12.67%, training & development for 12.24%, information sharing for 8.73%, selective hiring for 8.61%, and job security for 6.17%. We used the Anderson-Rubin Method, which ensures orthogonality of the estimated factors, to produce factor scores.

Table IV contains the items, the scale composite reliability (Cronbach α), and factor loadings for the rotated factors, with loading less than 0.40 omitted to improve clarity. The first factor, which included items measuring the firm's self-managed teams and decision making practices was labelled self-managed teams (seven items, $\alpha = 0.906$). The second factor, labelled compensation policy, included items measuring the firm's compensation practices and items measuring the firm's policy and HR practices to reduce turnover of employees (four items, $\alpha = 0.757$).

The third factor, labelled training & development, included four items (α=0.647) measuring the firm's emphasis on develop its personnel. The fourth factor, labelled information sharing, included two items (α=0.713) measuring the firm's policy to share critical information and performance data with its personnel.

The last two factors had low internal validity to be included in further analysis. The fifth factor, labelled selective hiring, included three items (α=0.556) measuring the firm's policy to recruit personnel that fits its culture and objectives. The six factor, labelled job security, included two items (α=0.383) measuring the ability of the firm to create a trustworthy business climate. The low scale composite reliability of job security can be attributed to the fact that the respondents, who were the managing directors, may have overrated job security in their workplace than it actually was.

Firm performance

Respondents, who were managing directors of the food companies, were asked to indicate their firm's performance as compared to the industry's average in these areas: perceived product quality, perceived production cost, perceived sales and overall firm performance. For perceived items, a 5-point scale ranging from bad (1) to very good (5) was used.

Although we believe the firm effectiveness measures are appropriate, they have some limitations which should be discussed. The first is that they are self-reported responses from managing directors, who may have a stake in seeing positive relationships between their decisions about personnel recruitment, training, development and compensation with achievement of firm's objectives. However, the responses from the sample contain ample variance and means that do not reflect an extremely strong positive bias (see Table V, variables 1 through 11). If the

respondents had greatly inflated their responses, there may have been more consistently positive results than were seen. Secondly, we used the Harmon's factor test to examine whether or not common methods variance in the predictor and outcome variables inflates the empirical relationships among the variables (Podsakoff *et al*. 2003). Harmon' test consists of a factor analysis of all relevant variables. If a large degree of common method variance is present, one factor will emerge. Such an analysis was conducted on the firm performance and HR practices variables of this sample. Seven factors emerged, with the first factor (which, in cases of common method variance, would account for a majority of the variance) only accounting for 18% of the variance. Thus, common method variance is unlikely to bias this sample.

Third, management perceptions about concepts like effectiveness and performance may actually be more valid indicators than objective data such as profitability, and sales, since these measures are directly related to a vast number of variables, such as trends in the economy, industry factors, and other environmental factors. Therefore, self-reported measures may, in some cases, represent more accurate descriptions than more objective measures (Day, 1996; Podsakoff and Organ, 1986). In the present study, since we are interested in the direction of causation between HR practices and firm effectiveness, the only people with the breadth and depth of knowledge to adequately report about these concepts are the managing directors.

<<Insert Table IV about here >>

<<Insert Table V about here >>

The Effect of HR practices on firm performance

We conducted univariate analysis and hierarchical multiple regression to assess the effect of HR practices on firm performance variables. Hierarchical regression is used to evaluate the relationship between a set of independent variables (HR practices) and the dependent variable(s) (performance measures), controlling for the impact of a different set of independent variables on the dependent variable. Petrocelli (2003) pointed out that '*…three basic principles that should underlie the hierarchical order of predictor variable entry (a) presumed causal priority (the direction of causal flow) (b) the hierarchical relevance of each predictor to the criterion, and (c) interactions among the predictor variables*.[p.14]

Univariate analysis

Table V presents the Pearson's correlation analysis. Control variables (sales, and number full-time employees) showed low correlation with performance variables (perceived product quality, production cost, perceived sales, perceived firm performance) as well as with every single HR practice. On the contrary, almost all firm performance variables were associated to some extent with HR practices.

Self-managed teams had significant association with perceived sales ($r=.328$, $p<.01$), and perceived firm performance ($r=-.323$, $p<.01$). Compensation policy had significant association with perceived cost ($r=-.419$, $p<.01$) perceived sales ($r=.284$, $p<.05$), and perceived firm performance ($r=.271$, $p<.05$). Training & Development had significant association with perceived product quality ($r=-.259$, $p<.05$) perceived sales ($r=.282$, $p<.05$), and perceived firm performance ($r=.345$, $p<.01$). Information sharing had significant association with perceived sales ($r=.252$, $p<.05$). Selective Hiring had significant association with perceived product quality ($r=-.480$, $p<.01$) perceived cost ($r=-.337$, $p<.01$), and perceived firm performance ($r=-.346$, $p<.01$). Job

security, which had low internal validity, showed no significant correlations with any permanence measure.

Hierarchical regression

We conducted hierarchical multiple regression to determine the best linear combination of HR practices for predicting firm performance. In hierarchical multiple regression, the focus is on the change in predictability associated with predictor variables entered later in the analysis (HR practices) over and above that contributed by predictor variables entered earlier in the analysis (control variables). Change in R square statistics are computed by entering predictor variables into the analysis at different steps. Change in R square and its corresponding change in F (ΔF) and *p* values are the statistics of greatest interest.

Initially, we entered the control variable (Firm size) in Step 1 of the regression equation. Based on the resource-based view, HR practices will be a competitive advantage if are difficult to emulate. Similarly, large firms may have a resource advantages over smaller firms. Therefore, we included firm size as a control variable, measured by the number of employees. In Step 2, we entered the five HR practices (perceived product quality, perceived cost, perceived sales and perceived firm performance) into the regression equations.

The results are reported in detail in Table VI. Figure 2 shows the results of the associations between the research hypotheses and the researched constructs.

The combination of HR practices in Step 2 significantly predicted firm performance, $F=8.292$, $p<.001$, with all five variables significantly contributing to the prediction. The beta weights, presented in Table VI, suggest that selective hiring, training & development, and decentralization, contribute most to predicting perceived overall

firm performance. The change in adjusted R square value was .475, p<.001. This indicates that 47.5% of the variance of firm performance was explained by the model. According to Cohen (1988), this is a large effect.

For most measures of firm performance, HR practices showed a significant effect. Specifically, in Step 2, the changes in adjusted R square value were: for perceived quality R^2=.350, p<.001 (F=4.865, p<.001), for perceived cost R^2= .368, p<.001 (F=5.404, p<.001) and for perceived sales R^2=.429, p<.001 (F=7.847, p<.001). Selective hiring and compensation policy were significant predictors for all dependant variables.

<<Insert Table VI about here >>

<<Insert Figure 2 about here >>

Discussion

Based on the results of the analysis of data, it is clear that there are linkages between HR practices and organisational performance. More specifically, each one of the HR practices, except job security, was significantly correlated with organizational performance measures. Selective hiring and compensation policy were significant predictors for all performance variables. Selective hiring, compensation policy, and training & development improved perceived product quality, thus indirectly improving the competitive advantage.

Compensation policy and selective hiring also helped to reduce production cost, which is a key component of competitive advantage. These findings provide tentative support of the contention that HR practices can create a competitive advantage. The discussion of results by each performance measure confirms these findings. In

particular, sales were affected by all HR practices (compensation policy, self-managed teams, information sharing, selecting hiring, and training and development). This finding indicates that no single HR practice that can increase significantly sales volume. It is more likely that putting into action more HR practices brings better results than focusing on one single HR practice. Product quality was largely affected by selective hiring and to a lesser degree by compensation policy. This finding can be attributed to the fact that product quality depends on recruiting qualified and well-trained employees such as food technologists and product managers. However, companies need to compensate and develop these employees in order to sustain a competitive advantage in product quality. Production cost is related to compensation policy, self-managed teams and selecting hiring. Interestingly, information sharing and training & development didn't have a significant relation to production cost. Overtly, the main cost driver is inputs such as feedstuff and primary production (more than 80% in some cases). Therefore, HR practices can have a minor contribution to product cost in comparison to inputs and production technique.

Conclusions, Recommendations, and Implications

The primary purpose of this study was to evaluate the impact of HR practices on organizational performance in Greece. From a large number of HR practices, we chose to examine the practices that were initially proposed by Pfeffer (1998). These practices have been empirically found support mainly in US and Northern European contexts. We hypothesised that the following practices are related to firm performance: (1) Compensation policy, (2) Decentralization & self-managed teams, (3) Information Sharing (4) Selective Hiring, (5) Training and Development and (6) Job Security. We measured firm performance with the following variables: perceived

product quality, perceived production cost, perceived sales, and overall firm performance.

We selected to test our research hypotheses selecting companies from the food sector, which plays a significant economic role in Greece and most Mediterranean countries. In food sector, the skills and abilities of people are critical in delivering food with safety and quality in competitive prices. Despite technological advances, recent food crises uncovered in a dramatic way that human capital may be the sole resource in safeguarding food quality and safety.

Results demonstrated that food companies that put into practice specific HR practices are more likely to increase their performance significantly. We can summarise some findings with practical implications:

- No single HR practice stands out: it is more likely that the higher effect is achieved when two or more HR practices are put into action together.
- Recruiting the right people, compensating and developing them properly contributes significantly to firm performance.
- Self-managing teams contribute to product cost.
- Job security has little or no direct contribution to firm performance

Furthermore, results indicated that selective hiring, compensation policy, and training & development improved perceived product quality, thus indirectly improving the competitive advantage. This bundle of HR practices is important to small and medium enterprises that can invest in human capital. SMEs investment on human capital can be seen as a process involving three steps: (1) hiring, (2) compensating, and (3) developing. All three steps of the process contribute to organisational performance. Therefore, high-performance workplace practices are a long-term, continuous investment in human capital that begins before employees are recruited and continues

with their ongoing development and proper compensation. Workplace practices affect many aspects of organisational performance: product quality, product cost, and sales. It is likely that HR practices impinge on more elements of firm performance, not explicitly included in this research but reported under the measure 'overall firm performance'.

One limitation in of the findings is the use of self-report questionnaires to collect data on all measures. However, there have been studies that show that self-report measures of performance can be reasonably valid (i.e. Youndt et al., 1996; Wall et al. 2004; Patterson. 2004), when provision is taken for the real possibility that questionnaires may capture the respondent's implicit performance theories more than any real phenomenon.

Another limitation of the study is its focus on the food sector. Despite these limitations, this study provides evidence regarding the effects of HR practices and suggests that selective hiring and compensation policy are important in the firm performance.

Future research could clarify the causal relationship between HR practices and firm performance. Another research stream is examining workplace practices in sets in order to assess their collective effect. The conceptual basis of further research can be extended. An interesting avenue for future research is the market-based competitive advantage approach, which declares that the market determines who is competitive or not (Reed et al., 2000). The market-based approach can provide another theoretical basis than resource-based view of competitive advantage, in order to examine the effect of HR practices on firm performance.

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Table I

What Effective Firms do with People

1. Financial incentives for excellent performance.
2. Work organisation practices that motivate employee effort and capture the benefits of know-how and skill.
3. Rigorous selection and selectivity in recruiting.
4. Higher than average wages.
5. Employee share ownership plans.
6. Extensive information sharing.
7. Decentralisation of decision-making and empowerment.
8. Work organisation based on self-managed teams.
9. High investment in training and skill development.
10. Having people do multiple job and job rotation.
11. Elimination of status symbols.
12. A more compressed distribution of salaries across and within levels.
13. Promotion from within.
14. Along-term perspective.
15. Measurement of HR practices and policy implementation.
16. A coherent view of the employment relation.

Source: J. Pfeffer (1998)

Table II

Construct / item development and supporting literature

Compensation policy	• We reward personnel to reduce turnover • We use incentives to boost individual performance • We select and pay employees based on their contribution • Employees that care about firm's objectives are rewarded	Ahmad, (2003); Banker et al. (2001); Barringer et al. (2005); Brown, et al. (2003); Cardon and Stevens (2004); Cho et al. (2005); Collins and Clark (2003); Delery and Doty (1996); Fey et al. (2000); Gerhart and Milkovich, (1990); Huselid (1995); Kohn (1993); Lawler and Rhode (1976); Ngo et al. (1998); Paul and Anantharaman (2003); Rodrıguez and Ventura (2003); Ryan (1982); Singh (2005); Tosi et al. (2004); Uen and Chien (2004); Widener (2005); Wimbush, 2005
self-managed teams	• We encourage decentralized decision making • We use teams to decide about production problems • We regularly use teams to perform various task • All team members contribute to decision making • We encourage and reward personnel being team players	Ahmad and Schroeder (2003); Black et al. (2004); Collins and Clark (2003); Jayaram et al. (1999); Nicholis et al. (1999); Pfeffer (1995); Singer and Duvall (2000); Tata and Prasad (2004); Wagner (1994) ; Yeatts and Hyten (1998)
Information Sharing	• Our employees know well our objectives and strategy • We inform personnel about their performance	Ahmad and Schroeder (2003); Burgess (2005); Chow et al., (1999); Constant et al. (1994); Ichniowski and Shaw (1999); Lawler et al. (1995); Morishima (1991); Nonaka (1994); Pfeffer, (1998); Roberts (1995); Ronde, (2001)
Selective Hiring	• We use consultant when hiring personnel • We use pre-recruitment tests • We select personnel that fits our culture	Cardon and Stevens (2004); Cho et al. (2005); Collins and Clark (2003); Huselid (1995); Michie et al. (2001); Paul and Anantharaman (2003); Schuster (1986)
Job Security	• We focus on job security • Employees that perform modestly do not get fired	Ahmad and Schroeder (2003); Buitendach and Witte (2005); Delery and Doty (1996); Fey et al. (2000); Givord and Maurin (2004) Kraimera et al. (2005); Michie and Maura Sheehan-Quinn (2001); Pfeffer (1995); Probst (2002)
Training and Development	• Training is a motive for employees to achieve more • We systematically train and develop our personnel • We provide training in one key skill • We train personnel to gain many skills and abilities	Barringer et al. (2005); Benson et al. (2004); Brewster (2004); Cardon and Stevens (2004); Cerio (2003); Doyle (1997); Husiled (1995); Koch and McGrath (1996); Ngo et al. (1998); Paul and Anantharaman (2003), Pfeffer (1995); Shah et al. (2003); Storey (2002); Zhu (2004)

Table III

Structure of Greek food & beverages industry in 2004 (N=1.445).

Characteristic	***Percentage***
Number of full time employees	
0-10	5%
11-50	9%
51-250	68%
251-1000	16%
>1000	1%
Sales	
0-500.000 €	26%
500.000-1.000.000 €	15%
1.000.000-2.000.000 €	19%
2.000.000-5.000.000 €	21%
5.000.000-10.000.000 €	9%
>10.000.000 €	17%

Table IV

Rotated factor loadings for the six HR practices

	Factor loadings					
	self-managed teams	**Compensation Policy**	**Training & Development**	**Information Sharing**	**Selective Hiring**	**Job Security**
We encourage decentralized decision making	**.864**					
We use teams to decide about production problems	**.845**					
We regularly use teams to perform various task	**.725**					
All team members contribute to decision making	**.724**					
We encourage and reward personnel being team players	**.638**	.551				
We reward personnel to reduce turnover		**.784**				
We use incentives to boost individual performance		**.608**	**.**543			
We select and pay employees based on their contribution		**.583**				
Employees that care about firm's objectives are rewarded		**.539**	.458			
Training is a motive for employees to achieve more			**.700**			
We systematically train and develop our personnel			**.635**			
We provide training in one key skill	.410		**.436**			
We train personnel to gain many skills and abilities		.549	**.427**			
Our employees know well our objectives and strategy				**.729**		
We inform personnel about their performance				**.778**		
We use consultant when hiring personnel					**.747**	
We use pre-recruitment tests					**.655**	
We select personnel that fits our culture		.449			**.476**	
We focus on job security						**.814**
Employees that perform modestly do not get fired				.446		**.619**
Eigenvalue	8.220	2.279	1.610	1.394	1.279	1.043
Initial percent of variance explained	34.249	9.497	6.709	5.810	5.330	4.347
Rotation sum of squared loadings (total)	4.207	3.040	2.937	2.094	2.067	1.480
Percent of variance explained	17.531	12.667	12.238	8.726	8.612	6.167
Cronbach α (sample N)	0.906	0.757	0.647	0.713	0.556	0.383

Extraction Method: Principal Component analysis. Rotation method: Varimax with Kaiser Normalization.

Table V

Means, Standard Deviations and Correlation Matrix

	Mean	SD	1	2	3	4	5
Control variables							
1. Sales	2910	960	1	0.077	0.047	-0.265*	0.092
Firm performance							
2. perceived product quality	3.52	1.04		1	0.559**	0.419**	0.528**
3. perceived cost	3.55	0.96			1	0.429**	0.528**
4. perceived sales	3.59	0.88				1	0.667**
5. perceived firm performance	3.69	0.87					1
HR practices variables							
6. Compensation Policy			0.005	0.193	0.419**	0.284*	0.271*
7. self-managed teams			-0.046	0.112	0.232	0.328**	0.323**
8. Information Sharing			-0.023	0.145	0.128	0.252*	0.233
9. Selective Hiring			0.077	0.480**	0.337**	0.241	0.346**
10. Training & Development			-0.166	0.259*	-0.033	0.282*	0.345**
11. Job Security			-0.171	-0.112	0.173	-0.016	-0.009

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Since the HR practices variables are factor scores, produced by the Anderson-Rubin Method, the scores produced have a mean of 0, a standard deviation of 1, are uncorrelated, the correlations with each other are .00, and thus are not included in this table. Sales: thousands of euros

Table VI

Hierarchical regression results of HR practices on five performance measures

	Perceived Product Quality		**Perceived Production Cost**	
	Step 1 (Control)	Step2 (HR practices.)	Step 1 (Control)	Step2 (HR practices.)
1. Firm Size	0.07 0.53	-0.0 -0.1	0.05 0.41	-0.0 -0.4
HR Practices				
1. Compensation Policy		0.20 1.82*		0.42 3.95***
2. self-managed teams		0.12 1.10		0.23 2.18*
3. Information Sharing		0.15 1.42		0.13 1.24
4. Selective Hiring		0.47 4.16***		0.35 3.22**
5. Training & Development		0.19 1.75*		-0.0 -0.4
F	.290	4.865****	.173	5.404***
Adjusted *R*square	-.012	.282	-.014	.302
Change in adjusted *R*square	.005	.350***	.003	.368***
	Perceived Sales		**Perceived Firm Performance**	
	Step 1 (Control)	Step2 (HR practices.)	Step 1 (Control)	Step2 (HR practices.)
Control variable				
1. Firm Size	-0.1 -1.4	-0.2 -2.3*	0.01 0.11	-0.0 -0.5
HR Practices				
1. Compensation Policy		0.29 3.01**		0.27 2.85**
2. self-managed teams		0.35 3.53***		0.32 3.37**
3. Information Sharing		0.25 2.57*		0.23 2.43*
4. Selective Hiring		0.26 2.60*		0.34 3.49***
5. Training & Development		0.29 2.93**		0.33 3.39**
Adjusted *R*square	.016	.402	-.016	.418
Change in adjusted *R*square	.032	.429***	.000	.475***

Standardized regression coefficients are reported. Within cells, first row figure is beta coefficients and second row the t-test values, significant at: *$p < 0$ .10, **p <0.01, ***p <0.001

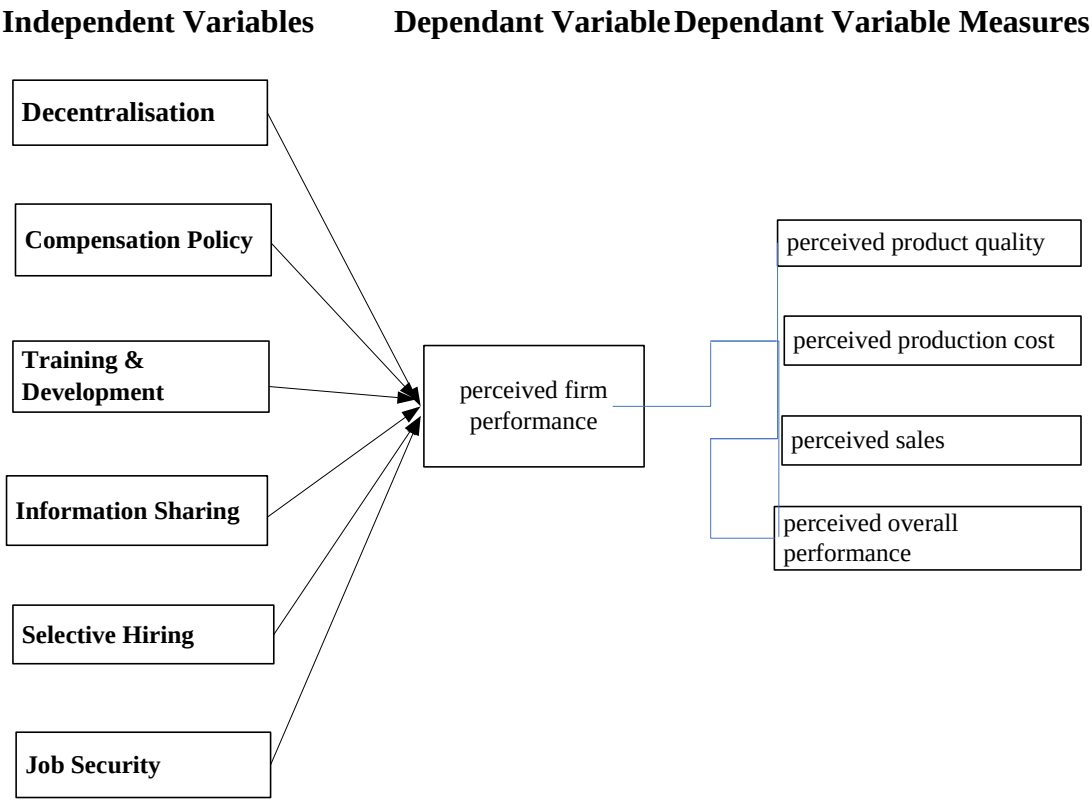

Figure 1 The association between hypotheses and constructs

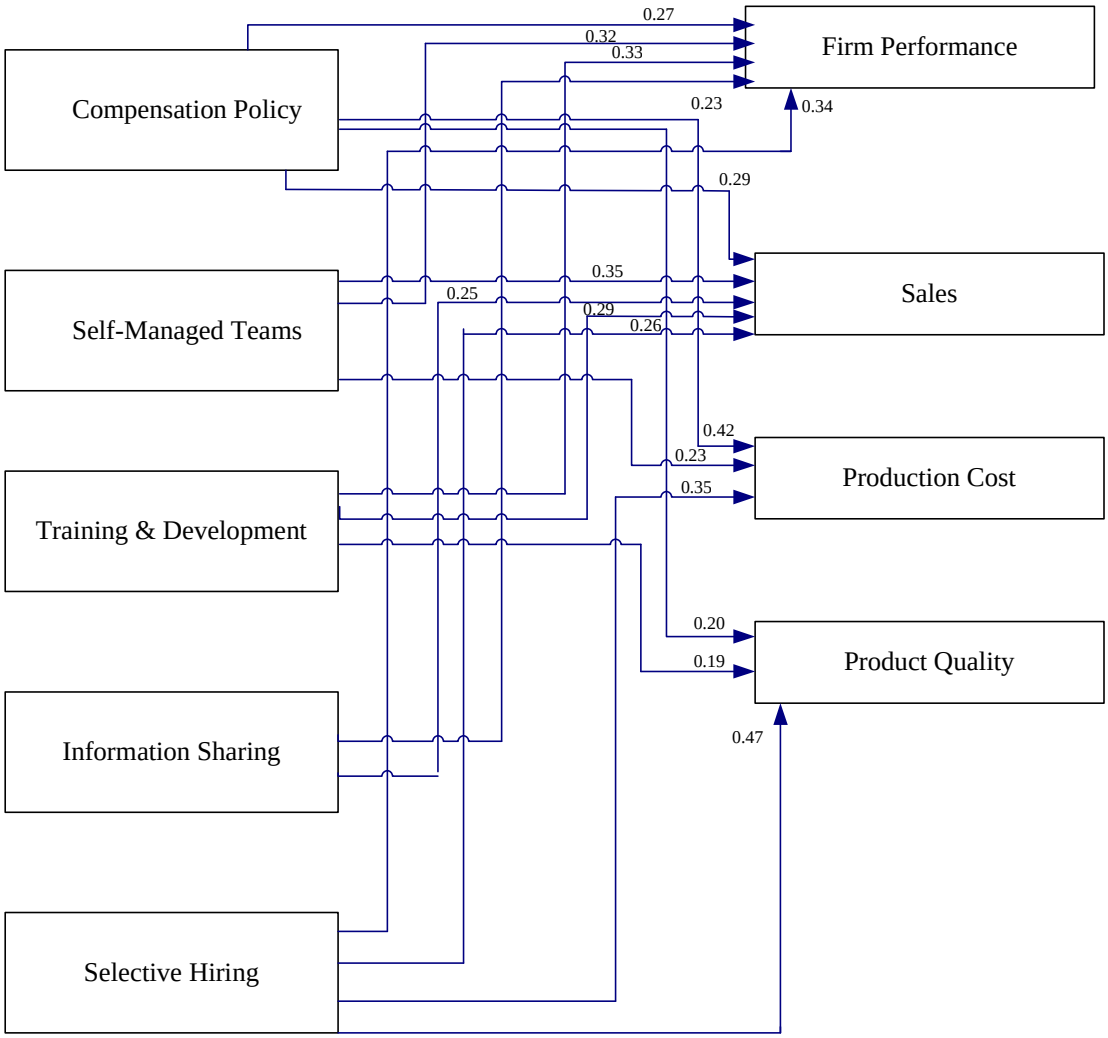

Figure 2 Model Results of Best HR Practices